

REMARKSClaim Objections

Claims 1 and 18 have been amended to remove the informalities as requested by the examiner. Specifically, the internal periods have been removed.

Claim Rejections under 35 USC §112

Claims 1 and 18 have been rejected as vague and unclear in the recitation of "expressing the nucleic acid for extended periods of time." Applicants have amended claims 1 and 18 to incorporate Specification wording into the claim. Support for the amended claim can be found in Example 5, starting on page 22, of the Specification.

Claims 8-13 have been rejected as vague and unclear in the recitation of "...ends derived from Tn5 transposase." Applicants have amended the claims to recite "Tn5 transposase recognition elements." Support for the amendment is present in the Specification on page 21, lines 1-3. Inside and outside Tn5 transposase elements are nucleic acid sequences recognized and accepted in the literature by those skilled in the art. The enclosed reference, Zhou and Reznikoff *J. Mol. Biol.* (1997) 271, 362-373, describes the Tn5 recognition elements.

Claims 18-20 have been rejected for reciting "...nucleic acid" without sufficient antecedent basis. Applicants have amended the claims to correct the defects and more clearly recite the claimed invention.

Claim rejections under 35 USC §102

The claims have been rejected as being anticipated by Wolff et al. (1990) which teaches delivery of RNA to mouse muscle and obtaining expression Goryshin et al. (2000) which teaches delivery of linear DNA to bacteria and yeast Tucker (1992) which teaches delivery of linear DNA to bacteria and Rolland et al. (2003) which teaches delivery of RNA and cDNA to mammalian cells. The Examiner points to the demonstration of delivery of linear nucleic acid to cells in each of these references.


Applicants have amended the claims to obviate the cited references. While each of the references show delivery of linear nucleic acid to a cell, they do not teach delivery of a linear nucleic acid expressing a transgene for longer than 7 days at levels 20% higher than if the transgene were present in a circular or supercoiled nucleic acid. Applicants have shown, for the first time, that delivery of the transgene on a linear vector provides higher levels of expression over a longer period of time than is obtained when using circular or supercoiled plasmid as is typically done (page 19, lines 12-25, and example 5, starting on page 22, of the Specification). The Applicants' invention provides longer term expression of a delivered transgene in a mammalian cell rather than simply the physical delivery of a nucleic acid to a cell as taught by Wolff, Goryshin, Tucker and Rolland. For many research and therapeutic purposes, long term expression of a transgene in a cell is of vital importance.

Claim rejections under 35 USC §103

The claims have been rejected as being anticipated by Rolland et al. (2003) and Tucker (1992). Applicants believe the amended claims are not obvious in light of Rolland and Tucker for the reasons stated above in response to the claim rejections under 35 USC §102.

The Examiner's objections and rejections are now believed to be overcome by this response to the Office Action. In view of Applicants' amendment and arguments, it is submitted that amended claims 1 and 18 and dependent claims 2-17 and 19-20 should be allowable.

Respectfully submitted,

  
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I hereby certify that this correspondence is being sent  
by facsimile transmission at 703-308-4242 to:  
Commissioner for Patents, PO Box 1450, Alexandria,  
VA 22313-1450 on this date: August 11, 2003.

  
Kirk Ekens